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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,025	02/06/2004	Farshid Ahmady	SLN-104-A	7723

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10/21/2004

Thomas N. Young
Young & Basile, P.C.
Suite 624
3001 West Big Beaver Road
Troy, MI 48084

EXAMINER

GRAVINI, STEPHEN MICHAEL

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/774,025

Applicant(s)

AHMADY, FARSHID

Examiner

Stephen Gravini

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20040513</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 20 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. That claims is considered non-enabling because it is self dependent and not described in the specification, such that its self dependency would enable one skilled in the art to make or use the invention. The Office will treat that claim under the prior art with the assumption that it was intended to depend upon claim 18.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. That claims is considered indefinite because it is self dependent and fails to particularly point out and distinctly claim the subject matter which applicant regards as the invention, such that its self dependency would clearly describe the invention. The Office will treat that claim under the prior art with the assumption that it was intended to depend upon claim 18.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 12-15, and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Maiello et al. (US 5,732,691). Maiello is considered to disclose the claimed invention comprising:

a burner **26** having an inlet for receiving an air and gas mixture and an exhaust for emitting exhaust gases generated by combustion of the air and gas mixture within the burner, an elongated radiant heating tube **22** having an inlet for receiving the exhaust gases emitted by the burner, a gas flow control assembly **44** for controlling the flow of gas to the burner, and a blower **24** for controlling the flow of air to the burner, characterized in that:

the blower comprises a two stage blower having a low speed for delivering a low air flow to the burner and a high speed for delivering a high air flow to the burner (please see column 6 lines 27-56); or alternatively:

a burner **26** for receiving and combusting an air and gas mixture to generate exhaust gases;

a radiant heating tube **22** receiving the exhaust gases from the burner and converting the exhaust gases into radiant heat;

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a two stage gas flow control assembly **30** operative to deliver gas to the burner at either a low level or a high level; and

a two stage blower operative to deliver air to the burner at either a low level or a high level (please see column 6 lines 27-56); or alternatively:

providing a two stage gas regulator **30** having a low setting for delivering a low gas flow to the burner and a high setting for delivering a high gas flow to the burner;

providing a two stage blower having a low speed for delivering a low air flow to the burner and a high speed for delivering a high flow to the burner (please see column 6 lines 27-56); and

operating the blower at the low speed when the regulator is operating at the low setting and at the high speed when the regulator is operating at the high setting (please see column 4 lines 47-56). Maiello is also considered to disclose the claimed blower including an electric motor having a low winding **52** corresponding to the blower low speed and a high winding **50** corresponding to the blower high speed (wherein the disclosed switch is considered to anticipate the claimed winding because both electrically change the blower speed by implication), a valve having a first and second position corresponding to 100% closed and 100% open (column 4 lines 57-64), high speed blower operation at high speed gas regulation (column 4 line 51), and low speed blower operation at low speed gas regulation (column 4 line 52) and in combination wherein the blower operates at the high level when the gas regulator is operating at the high level and the blower operates at the low level when the gas regulator is operating at the low level (column 4 lines 57-64).

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Claim 21 is rejected under 35 U.S.C. 102(b) as being anticipated by Seel (US 5,211,331). Seel is considered to disclose the claimed invention comprising:

defining a temperature set point of the room (please see column 1 lines 32-40);

defining a programmed temperature differential (please see column 4 lines 61-67);

monitoring the temperature of the room (please see column 2 lines 7-20);

igniting the burner when the room temperature is less than the temperature set point (please see column 2 lines 59-63);

defining a temperature threshold as the temperature set point minus the temperature differential (please see column 5 lines 1-5);

operating the blower at the high level when the room temperature is equal to or below the temperature threshold (please see column 5 lines 6-21); and

operating the blower at the low level when the room temperature is greater than the temperature threshold and lower than the set point temperature (please see column 6 lines 21-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 4-11, 16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maiello in view of Caruso et al. (US 5,989,011). Maiello is considered to disclose the claimed invention, as discussed above under the anticipatory rejection, except for the claimed two valves and two parallel paths convergence. Caruso, another heater, is considered to disclose two valves and two parallel paths convergence at column 4 lines 12-64. It would have been obvious to one skilled in the art to combine the teachings of Maiello with the two valves and two parallel paths convergence, considered disclosed by Caruso for the purpose of allowing multiple flow paths for blower speed variability such that the blower load is evenly distributed.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maiello in view of Seel. Maiello is considered to disclose the claimed invention, as discussed above under the anticipatory rejection, except for the claimed temperature differential blower speed control. Seel, another heater, is considered to disclose temperature differential blower speed control as discussed in the second anticipatory rejection above. It would have been obvious to one skilled in the art to combine the teachings of Maiello with the temperature differential blower speed control, considered disclosed by

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Seel for the purpose of allowing precise blower speed variability such that the blower based on temperature sensing such that a burner heat load is evenly distributed.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seel in view of Maiello. Seel is considered to disclose the claimed invention, as discussed above under the anticipatory rejection, except for the claimed operating the blower at the low speed when the regulator is operating at the low setting and at the high speed when the regulator is operating at the high setting. Maiello, another heater, is considered to disclose operating the blower at the low speed when the regulator is operating at the low setting and at the high speed when the regulator is operating at the high setting at column 4 lines 47-56. It would have been obvious to one skilled in the art to combine the teachings of Seel with the operating the blower at the low speed when the regulator is operating at the low setting and at the high speed when the regulator is operating at the high setting, considered disclosed by Maiello for the purpose of allowing precise gas regulation variability such that the burner operation based on temperature sensing such that a burner heat load is evenly distributed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reference A, cited in this action, is also considered to disclose a heater burner with plural stage and blower operation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen Gravini whose telephone number is 703 308

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7570. The examiner can normally be reached on normal weekday business hours (east coast time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira S. Lazarus can be reached on 703 308 1935. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Smg October 18, 2004

Stephen M. Ghani